



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,969	02/12/2004	Hsueh-Chin Liao	0195-31UA	7441
21704	7590	01/23/2006	EXAMINER	
LAW OFFICES OF ERIC KARICH 2807 ST. MARK DR. MANSFIELD, TX 76063			YEAGLEY, DANIEL S	
			ART UNIT	PAPER NUMBER
			3611	

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,969

Applicant(s)

LIAO ET AL.

Examiner

Daniel Yeagley

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action in view of the after-final amendment filed 12/28/05 which was entered and, concluded with the finality of that action being withdrawn, however upon further review of the prior art and an updated search; the indicated allowability of claims 14-16 and 8-13 are withdrawn in view of the newly discovered reference(s) to McGreen '390 and Yaguchi '488. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by McGreen '390.

McGreen shows an electrically powered bicycle comprising an electric motor 41 coupled to a wheel (figure 6), such that when a shaft of the electric motor turns, a rotating force is provided to the wheel, and includes a control unit electrically connected to the electric motor, to a battery and to a momentary pushbutton switch 57 (figure 7), wherein the control unit is configured to provide electrical power from the battery to the electric motor dependent upon a number of times the pushbutton switch is pressed and released within a predetermined period of time (column 5 – 6, line 32 – line 13).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGreen '390 in view of Yaguchi '448.

McGreen disclosed an electrically powered bicycle comprising an electric motor coupled to a front or rear wheel (column 8) via a drive mechanism (figure 16) and included a frame, wherein the battery and the control unit are located within the main frame (figure 1) but failed to show the battery and control unit being located within a main frame tube and further failed to show the electric motor coupled to the wheel comprising a first gear having a plurality of teeth connected to a shaft of the electric motor that meshes with the teeth of a second gear connected to the wheel.

Yaguchi shows an electric powered bicycle that utilizes an electric motor coupled to a rear wheel via a drive mechanism that comprising a first gear 30 with a plurality of teeth connected to a shaft of the electric motor 1 via a gear G that meshes with the teeth of a second gear 31 connected to the wheel 26 (figure 5) as claimed and further discloses the art of installing the battery and the control circuit within a portion of the frame.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the drive means of McGreen drive mechanism with an alternative gear driven means such as suggested by Yaguchi; simply as a matter of design choice dependent

Art Unit: 3611

upon users preference which would ultimately provide a more enhanced direct drive coupling between the motor and the wheel which is well known in the art as alternative drive couplings to drive a wheel and further would have been obvious to one of ordinary skill in the art to have further modified the frame of McGreen to locate a battery and control unit within a main frame tube as suggested by Yaguchi simply as an alternate space for installing a control circuit and a battery within portion of the frame as suggested by Yaguchi (column 3, line 34-37 and column 5, line 52-53) and in order to better protect the components from the elements and for enhanced aesthetic appearance.

6. Claims 1 and 9 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiura '676 in view of McGreen '390.

Sugiura clearly shows in figure 1, an electrically powered bicycle comprising a rear fork assembly with a pair of structures extending from a frame with a wheel attached between the structures of the rear fork assembly comprising a rim and spokes, wherein a drive mechanism comprising a first toothed gear 8 connected to a shaft of an electric motor 1 meshed with the teeth of a second toothed gear 7 that is connected to the rim of the wheel, wherein the drive mechanism is disposed between the adjacent electric motor and the wheel and further shows a control unit electrically connected to the electric motor, to a battery and to a switch (figure 2), but failed to disclose; as best understood, a control unit electrically connected to the motor and the battery and to a momentary pushbutton switch that is configured to provide electrical power from the battery to the electric motor dependent upon a number of times the pushbutton switch is pressed and released within a predetermined period of time.

McGreen as stated above discloses an electrically powered bicycle comprising a control unit that incorporates a momentary switch 57 in a control unit arrangement that is electrically connected to an electric motor and a battery (figure 7), wherein the control unit arrangement is configured to provide electrical power from the battery to the electric motor dependent upon a number of times the pushbutton switch is pressed and released within a predetermined period of time (column 5 – 6, line 32 – line 13), such that the predetermined time period would begin when the momentary switch is pressed and released a first time, such that when the switch is pressed and released each time would provide electrical power to the motor continuously and is capable of having the motor turned on for a first period of time and subsequently off for a second period of time, wherein the first and second period of time are capable of being substantially equal, and if the push button switch of McGreen is pressed and released rapidly during a predetermined period of time could turn the motor on and off rapidly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the control unit of Sugiura motor driven bicycle utilizing a simple well known momentary push button electrical switch, such as suggested by the push button momentary switch of McGreen control unit in order to enhance the control means by simply utilizing a momentary electrical switch that would intermittently connect the motor to the battery for a predetermined period of time dependent solely upon the user command of the switch to provide electrical power from the battery to the motor which is clearly dependent upon a number of times the pushbutton switch would be pressed and released within a predetermined period of time by the user in order to provide a simple means to control the power to the motor and better control the movement of the bicycle as needed.

Art Unit: 3611

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiura '676 as modified by McGreen '390 in further view of Yaguchi '448.

Sugiura disclosed a rim driven motorized bicycle with a control unit as modified by the momentary pushbutton switch of McGreen as stated above but failed to show the battery and control unit being located within a main frame tube.

Yaguchi as stated above disclosed an electric powered bicycle having an electric motor coupled to a rear wheel via a drive mechanism that suggested the art of installing the battery and the control circuit within a portion of the frame (column 3, line 34-37 and column 5, line 52-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the bicycle of Sugiura as modified by McGreen with a modified frame that would house a battery and control unit within a main frame tube as suggested by Yaguchi simply as an alternate space for installing a control circuit and battery in order to better protect the components from the elements and for enhanced aesthetic appearance.

Response to Arguments

8. Applicant's arguments with respect to claims 1 and 9 – 16 have been considered but are moot in view of the new ground(s) of rejection as now claimed in further view of the newly discovered prior art as cited above, which more clearly disclose the features as claimed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3611

Turner '072, Schless '137 and Gannon '101 show a motorized bicycle with a control unit within the frame.


Parks '838 and Seib '982 show a control unit having a momentary push button control means.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Yeagley whose telephone number is (571)-272-6655. The examiner can normally be reached on Mon. - Fri; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D. Morris can be reached on (571) - 272 - 6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.Y.


LESLEY D. MORRIS
ASSISTANT PATENT EXAMINER
ELECTRONIC BUSINESS CENTER 3600